

Claims:

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1. A conveyORIZED horizontal processing line for wet-processing a workpiece (2) having the following facilities:

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- (a) at least one respective transport member (3; 12, 18) for the workpiece (2) located above and beneath a conveying path (100) which extends in a horizontal direction of transport (14) and in which the workpiece (2) may be conveyed through the conveyORIZED processing line;

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- (b) at least one processing facility (6) for the workpiece (2) which is disposed above the conveying path (100) and forms, together with the at least one transport member (3), one structural component above the conveying path (100);

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- (c) at least one adjusting device (4; 9, 10; 5, 26) for the structural component, the at least one adjusting device (4; 9, 10; 5, 26) being configured in such a manner that the structural component may be raised or lowered in a substantially vertical direction and/or may be pivoted.

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2. The conveyORIZED processing line according to claim 1, **wherein** means (4; 9, 10; 5, 26) are provided by means of which the spacing of the structural component from the workpiece (2) conveyed past said structural component may always be maintained substantially even.

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3. The conveyORIZED processing line according to any one of the previous claims, **wherein** at least one sensor is provided to determine the thickness of the workpiece (2).

4. The conveyORIZED processing line according to claim 3, **wherein** the at least one sensor is disposed in the entrance region where the workpiece (2) enters the conveyORIZED processing line.
- 5 5. The conveyORIZED processing line according to any one of the previous claims, **wherein** a memory is provided for the data concerning the thickness of the workpiece (2).
- 10 6. The conveyORIZED processing line according to any one of the previous claims, **wherein** a logic for tracking the workpiece (2) in the conveyORIZED processing line and a control system for the at least one adjusting device (4; 9, 10; 5, 26) for the structural component are provided so that, thanks to the logic for tracking the workpiece (2) and to the control system, the height of the structural component is adjustable to the thickness of the workpiece (2) conveyed past said structural component.
- 15 7. The conveyORIZED processing line according to any one of the previous claims, **wherein** the at least one adjusting device is selected from the group consisting of a motor-driven eccentric shaft (5), a motor-driven threaded spindle (9), a hydraulically or pneumatically driven adjusting device and a motor-driven sheathed cable.
- 20 8. The conveyORIZED processing line according to claim 7, **wherein** auxiliary energy for hydraulically driving the at least one adjusting device may be tapped from at least one pump which is provided on the conveyORIZED processing line for supplying jet nozzles, spray nozzles or flow nozzles (6) and/or for circulating the bath liquid to ensure the circulation of the liquid in the bath.
- 25 9. The conveyORIZED processing line according to any one of the previous claims, **wherein** the at least one processing facility is selected from the
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group comprising anodes, cathodes, jet nozzles, flow nozzles (6), spray nozzles and suction nozzles for processing fluid and blast and suction nozzles for gases as well as additional guide elements for thin workpieces (2).

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10. The conveyORIZED processing line according to any one of the previous claims, **wherein** the at least one transport member (3; 12, 18) is configured to have an elongated shape and extends in a horizontal direction, substantially transverse to the direction of transport (14):

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11. The conveyORIZED processing line according to claim 10, **wherein** the at least one transport member (3) disposed above the conveying path (100) is guided in lateral long hole bearings (11) disposed outside of the conveying path (100).

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12. The conveyORIZED processing line according to any one of the previous claims, **wherein** the at least one transport member is selected from the group comprising transport rollers (3; 12) and of transport rolls (18) mounted on an axis.

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13. A method of wet-processing a workpiece in a conveyORIZED horizontal processing line involving the steps of

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(a) first acquiring data about the thickness of the workpiece and storing them in a data memory, prior to feeding the workpiece (2) into the processing line,

(b) bringing the workpiece (2) to the conveyORIZED processing line in one direction of transport (14) and passing it through the conveyORIZED processing line on a conveying path (100),

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(c) adjusting a structural component, which is comprised of at least one transport member (3; 12, 18) for the workpiece (2) and of at least one processing facility (6) and which is disposed

above the conveying path (100) in the conveyORIZED processing line, in such a manner that, as a function of the thickness of the respective workpiece (2) being passed therethrough, the structural component is raised or lowered and/or pivoted relative to the conveying path (100).

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14. The method according to claim 13, **wherein** the spacing of the structural component from the workpiece (2) conveyed past said structural component is always maintained substantially even.

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15. The method according to any one of claims 13 and 14, **wherein** the thickness of the workpiece (2) is determined by at least one sensor as it enters the conveyORIZED processing line.

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16. The method according to any one of claims 13 to 15, **wherein** the data about the thickness of the workpiece (2) are converted into control signals and wherein said control signals are transmitted to trigger at least one adjusting device (4; 9, 10; 5, 26) for raising, lowering and/or pivoting the structural component.

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17. The method according to any one of claims 13 to 16, **wherein** the actual location of the workpiece (2) in the conveyORIZED processing line is permanently logically tracked and wherein the structural component is raised, lowered or pivoted as a function of said location.

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18. The method according to any one of claims 13 to 17, **wherein** the structural component is raised, lowered and/or pivoted by way of at least one adjusting device (4; 9, 10; 5, 26) which is driven by means of an actuating drive and is selected from a group comprising motor-driven eccentric shafts (5), motor-driven threaded spindles (9), hydraulic drives, pneumatic drives and motor-driven sheathed cables.

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19. The method according to any one of claims 13 to 18, **wherein** auxiliary energy for hydraulically driving the at least one adjusting device (4; 9, 10; 5, 26) is tapped from at least one pump which is provided on the conveyORIZED processing line, said pump supplying the jet nozzles, the spray nozzles or the flow nozzles (6) and/or serving to circulate the bath fluid to ensure the circulation of the fluid in the bath.
20. The method according to any one of claims 13 to 19, **wherein** a set point for the height adjustment of the structural component is determined by measuring the thickness of the workpiece (2) as it is being brought to the conveyORIZED processing line and by logically tracking the workpiece (2) as it is being conveyed through the conveyORIZED processing line.
21. The method according to any one of claims 13 to 20, **wherein**, as the workpiece (2) is being conveyed through the conveyORIZED processing line, the structural component is pivoted in such a manner that the height of the region of the structural component located on the entrance side of the line is adjusted to the thickness of a new workpiece (2) entering the line and wherein, as the workpiece (2) is conveyed further, the structural component is again pivoted in such a manner that the height of the region of the structural component located on the exit side of the line is now adjusted to the thickness of said entering workpiece (2).
22. The method according to any one of claims 13 to 21, **wherein** the height of the structural component is adjusted to the thickness of the workpiece (2) in such a manner that the force exerted by the at least one transport member (3) onto the respective one of the passing workpieces (2) is limited.